

United States Department of Homeland Security  
Transportation Security Administration

Statement of Dr. Randy Null  
Assistant Administrator, Operational Process and Technology

Committee on Government Reform  
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Good morning Mr. Chairman, Congressman Waxman, and Members of the Committee. I am pleased to have the opportunity to appear before you today at Washington Dulles International Airport on behalf of the Transportation Security Administration (TSA) to discuss our Electronic Baggage Screening Program. We believe this program is an important part of our efforts to create a comprehensive, multi-layered system of security throughout the aviation sector.

Created in the aftermath of the 9/11 terrorist attacks, the Transportation Security Administration continues to pursue its vital mission of protecting our Nation's transportation systems. Fundamentally, our challenge is to protect passengers, freight, and transportation network assets in a constantly changing threat environment. We know that terrorists will not only look for weaknesses in our transportation system, but they will also adapt to perceived changes in its security measures. Our approach to security in every transportation sector, therefore, must be based upon flexibility and adaptability.

As we work to enhance transportation security, we are guided by four key operating principles: First, we will use risk-based analysis to make investment and operational decisions. Second, we will avoid giving terrorists or potential terrorists an advantage based on our predictability. Third, we will continue to intervene early based on intelligence, and focus our security measures on the terrorist, as well as the means for carrying out the threat. And, finally, we will build and take advantage of security networks.

TSA is responsible for not only conducting the screening of checked baggage carried onboard TSA regulated commercial aviation flights, but also for the procurement, installation, and maintenance of explosives detection systems used to screen that checked baggage. As passenger levels continue to grow, and airports renovate and build new terminals, we must continue to evaluate equipment needs and placement to accommodate increased traffic levels. These types of activities must be factored into our application of risk-based analysis in making our investment decisions.

TSA uses two different technologies to screen checked baggage for explosives. The first is the automated Explosives Detection System (EDS), which uses computer-aided tomography X-rays adapted from medical technology. The EDS recognizes the characteristic signatures of threat explosives, and alerts the operator to the presence of a

potential threat. Because EDS has automated the process by which a potential threat is identified, it is the preferred method of baggage screening. While we continue rely on the judgment of trained operators to resolve alarms, EDS can clear between 80% and 85% of the baggage without operator intervention. We have deployed over 1,500 EDS units at more than 100 airports throughout the United States.

According to the EDS Strategic Plan, equipment is installed as either as some variation of an in-line system operated within an airport's baggage handling system, or it may be operated separately in a stand-alone configuration. In-line installation, where it is optimal in terms of traffic levels and facility design, offers several advantages, including a much higher baggage throughput rate, and can reduce staffing requirements if the images can be viewed from multiple EDS units in one location. A stand-alone installation requires additional personnel to operate, because baggage must be manually loaded into and unloaded from the EDS unit. While we clearly recognize the benefits that can be realized from pursuing some form of in-line EDS solution for most high volume airports, TSA does not finance the facility modifications needed to accommodate construction of in-line systems solely from its own budget. These costs are typically funded by the airports or airlines.

The other technology used for checked baggage screening is explosives trace detection (ETD) equipment. ETD systems use chemical analysis to identify the potential presence of explosives. When using an ETD, samples are taken by rubbing the bag with a special swab, and that swab is then analyzed to determine if any traces of explosives are present. ETD can be used for both primary screening, as well as secondary screening to resolve alarms from an EDS unit. Currently, TSA has deployed over 6,500 ETD systems to 448 airports nationwide. Because the ETD requires that a sample be retrieved from the item to be screened, it is manpower-intensive. Additionally, the throughput capacity for ETD is considerably less than that of EDS, averaging 40 bags per hour per screener. TSA continually evaluates the throughput requirements at those airports using only ETD solutions to determine if passenger growth may warrant substitution of ETDs with EDS technology.

TSA continues to seek the best technology solutions to accomplish the critical task of screening checked baggage for explosives. Since the large-scale deployment of EDS systems in 2002 and 2003, the continued development of this technology has resulted in incremental improvements, including lower false alarm rates and improved throughput capabilities. We also certified two new EDS products in 2005, including the Reveal CT-80 and Analogic 6400 developed under the Research and Development Phoenix Project. These technology products have provided additional options for TSA to use when assessing optimal security solutions to meet the variety of airport needs. In the case of the Reveal CT-80, the equipment takes up less space than the previous version EDS units and while the throughput capacity is lower than the larger EDS units, it offers an accurate option for smaller airports that currently use only ETD. In the case of the Analogic 6400, the technology offers an upgrade to one of the EDS machines we have currently deployed, with improved image quality for alarm resolution, increased throughput capacity, and improved performance reliability.

Research into both short and long term solutions is expected to continue in FY 2006 and FY 2007, with work on EDS technologies that can operate at up to 900 bags per hour and employ revolutionary threat detection concepts.

### **Installation Costs**

In addition to the costs associated with the purchase and lifecycle maintenance of the technologies, installation costs are a significant component of the total cost of deployment. The cost of installing EDS and ETD technologies consist of some or all of the following, depending on the equipment and specific location: 1) site survey and design, 2) site preparation and facility modification, 3) warehousing and shipping, 4) testing and 5) program support.

In 2002, a significant Federal commitment of installation funding was pledged through letters of intent (LOI) to reimburse airport operators for facility modification projects supporting the installation of in-line EDS equipment. TSA has issued eight letters of intent covering nine airports, including Atlanta, Boston, Dallas-Fort Worth, Denver, Las Vegas (McCarran), Los Angeles and Ontario, California, Phoenix, and Seattle. TSA's commitment to these nine airports totals \$957.1 million, out of total project costs of approximately \$1.3 billion. In FY 2006, we anticipate providing \$240.4 million in LOI reimbursements at a 75 percent federal share for the existing LOIs. These costs are solely for facility alteration and do not include the costs to procure and install EDS machines, which are fully funded by TSA. Equipment purchases associated with the LOI airports will continue in FY 2006.

In FY 2006, TSA will continue to procure and install equipment at LOI and non-LOI airports, including Dulles, in accordance with the FY 2006 expenditure plan. This continuing effort is required to maintain sufficient screening capacity as passenger traffic increases and operational circumstances at airports change.

### **Future Plans**

We have recently completed a Strategic Plan for the Electronic Baggage Screening Program (EBSP) that prioritizes future equipment deployments, and will begin using that plan to make investment decisions in FY 2007. The plan was developed using a top-down prioritization model to perform a systematic, comprehensive assessment of screening alternatives at airports, and prioritize projects by balancing security and economic factors. These results feed into a model that identifies the optimal schedule for deploying equipment to airports given funding, equipment availability and other key assumptions. These continuing system deployment efforts are required to maintain sufficient screening capacity as passenger traffic increases over the next 10 years as projected by the Department of Transportation.

Given the variety of local factors and conditions that will affect funding and design decisions, the determination of an optimal screening solution for an airport requires a

partnership between TSA, the airport operator, and its key airline tenants. TSA will work closely with airport operators and other key stakeholders to integrate the planning being conducted by many airport operators with the initial plans developed as part of TSA's Strategic Plan. This will ensure that airports design systems that will adequately address screening requirements, and ensure that the best overall implementation strategy will be executed.

The final component of the Electronic Baggage Screening Program Strategic Plan will be completed in 2006 with the release of a cost-share study required by the Intelligence Reform and Terrorism Prevention Act of 2004 (P.L. 108-458). Through this study, TSA is working with aviation industry stakeholders to develop a cost-sharing formula and innovative financing solutions for the Electronic Baggage Screening Program. We anticipate that the initial results from the cost-share study will be available later this year.

## **Conclusion**

TSA's mission is to protect the Nation's transportation systems while facilitating the movement of people and commerce. The Electronic Baggage Screening Program is a vital piece of our aviation security network. TSA's planned investments in future technology and advanced design will help to increase security and enhance efficiency of our screening efforts.

Thank you again for the opportunity to testify today. I will be pleased to respond to questions.